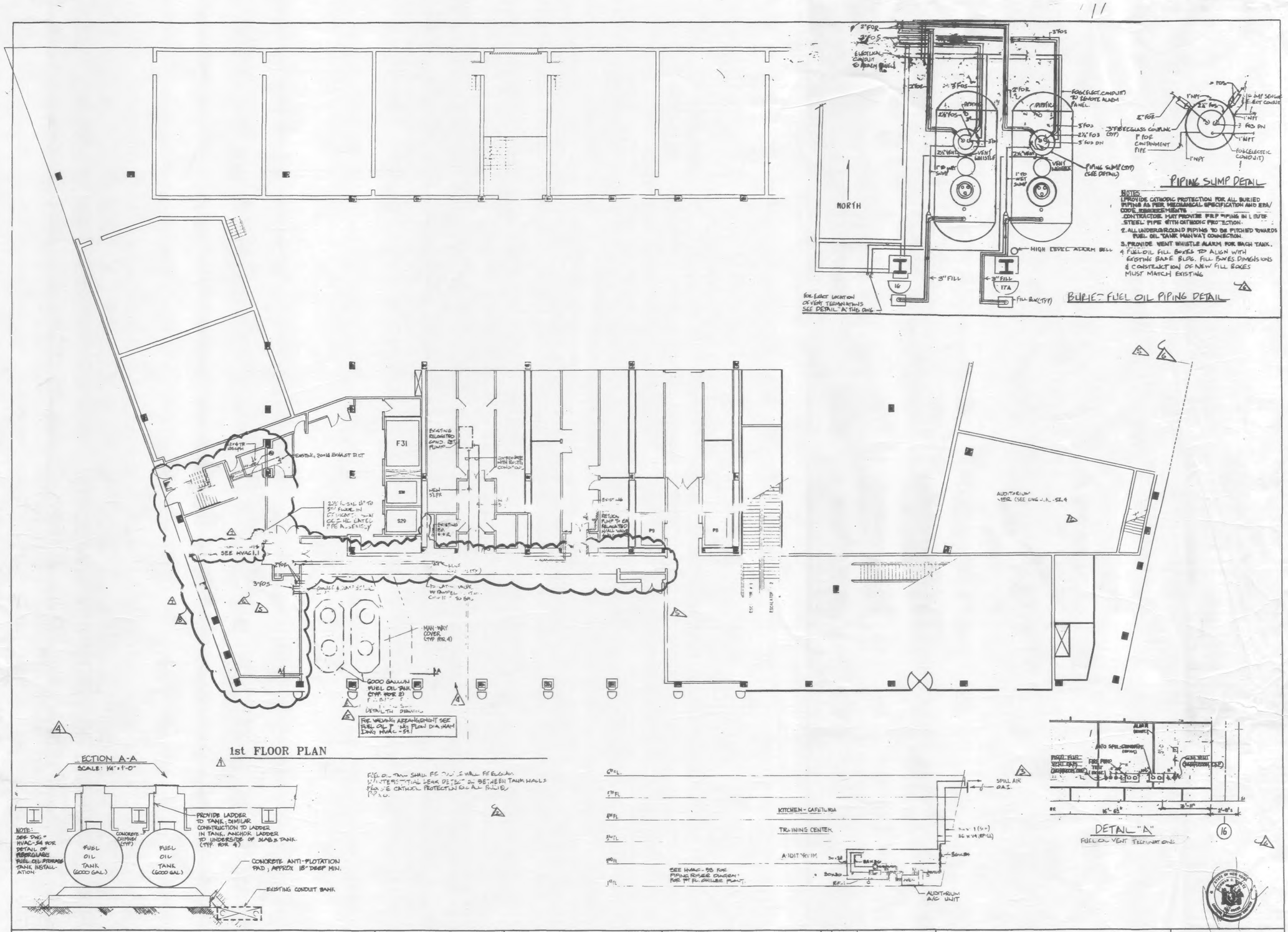

Salomon Brothers Inc

7 WORLD TRADE CENTER HEADQUARTERS
NEW YORK, NEW YORK 10048

BARCLAY STREET
VESEY STREET
KEY PLAN

NOTES
1. SEE ARCH. DWGS. FOR DEMISED PREMISES

LEGEND
EXISTING BASE BUILDING
CONNECT TO EXISTING

No.	Date	Revision
7	7-6-90	ISSUED FOR BULLETIN #107
6	12-15-89	REVISED FOR BULLETIN #83
5	2-2-89	ISSUED FOR CONSTRUCTION
4	11-15-88	REVISED AS NOTED
3	9-15-88	REVISED AS NOTED. BASE BLDG MODIFICATIONS
2	8-31-88	REVISED AS NOTED.
1	4-5-88	REVISED AS CIRCLED
0	3-1-88	ISSUED FOR PA APPROVAL
	2-20-87	ISSUED FOR CONSTRUCTION
	2-19-88	REVISED PER PA REVIEW COMMENTS OF MAR 31 & BASE BLD. MODIFICATIONS (DWGS. E-1.1-E-1.5 & E-2.1)

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1st FLOOR PLAN

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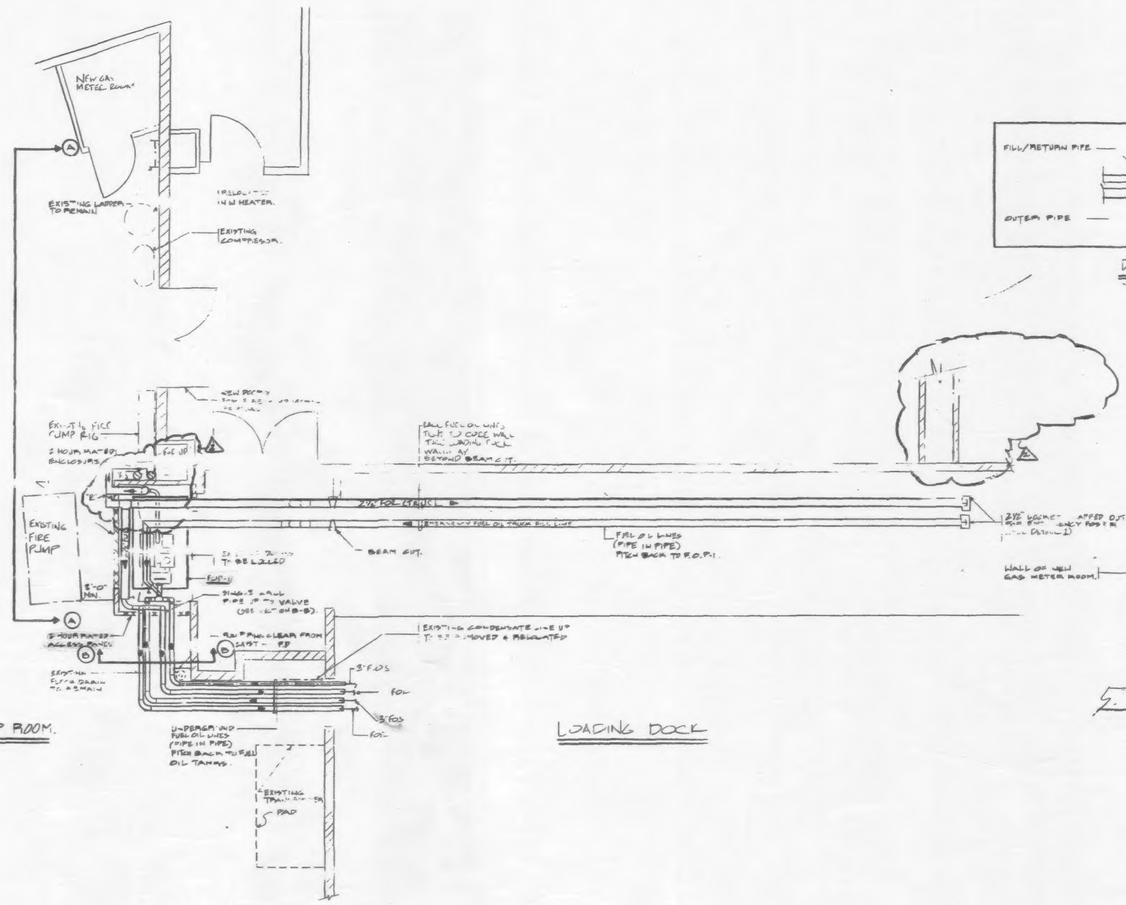
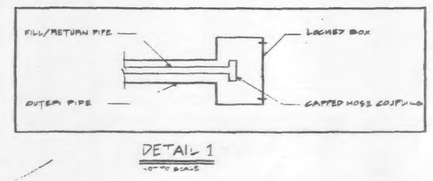
Project No. 8804-600
Sheet No. HVAC-1
Date 1/8" = 1'-0"

...FULL TOC...
P3019-TESTBMK & PSH
P3019-FSPTKBMK & PSH
P3019-FSPTKWD & PSH
P3019-FSELKBMK & PSH
P3019-FSCOLWD & PSH
P3019-SCR.PLS
P3019-TTLSL.PLS
RUN NOV 30 1988
17:59:59
SDV/VT
RUN(14685234)

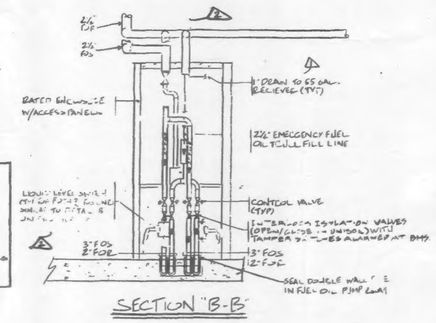
SALOMON BROTHERS (1990)

LUTC1-25-S1/DSK2/GRAUPS/HVAC-1

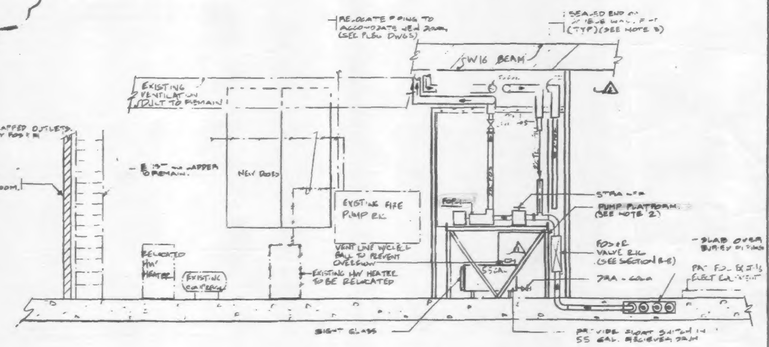




DETAIL 1



SECTION "B-B"



SECTION "A-A"

NOTES:
1. MANUAL SEA VALVES TO BE INTERLOCKED CAPABLE OF SUPPLING AND RETURN FROM ONE TANK AT A TIME.
2. PUMP PLATFORM SUITABLE FOR ___ SUBMIT DETAIL.
3. ALL DOUBLE WALL PIPES END @ WITH ROOM.
4. PUMP TO BE CONFIGURED SUCH THAT ALL REQUISITE MAINTENANCE MAY BE PERFORMED FROM THE FRONT AND ___ SIDE ONLY. (SEE ARCH. DWGS. FOR LOCATION OF ACCESS DOOR)
5. CONTROL PANEL TO BE REMOTELY LOCATED
6. 55 GAL. RECEIVER DRUM TO BE RATED FOR 5 PSIG MIN.

Salomon Brothers Inc

7 WORLD TRADE CENTER HEADQUARTERS
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NOTES

LEGEND

No.	Date	Revision
1	7-5-90	ISSUED FOR BULLETIN #10
2	7-20-90	ISSUED FOR BULLETIN #068
3	2-15-89	ISSUED FOR BULLETIN #13

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FUEL OIL PUMP ROOM PLAN AND SECTION.

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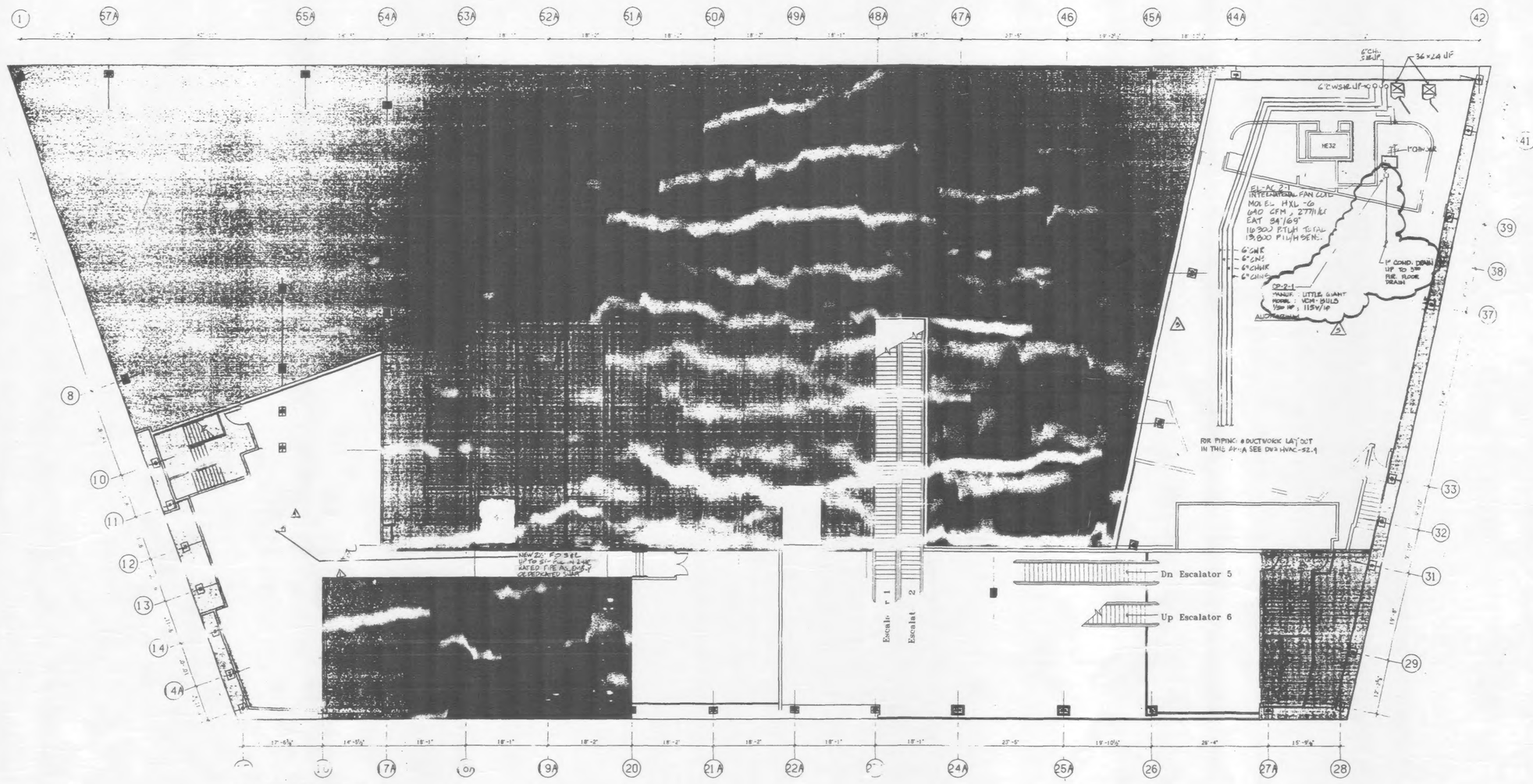
Project No. 8976-000
Date FEB 15 1990
Scale 3/8" = 1'-0"
Sheet No. HVAC-1.1

WTC1-25-S/DISK 2/Group 5/HVAC-1.1



2nd FLOOR PLAN

Salomon Brothers Inc

7 WORLD TRADE CENTER HEADQUARTERS
NEW YORK, NEW YORK 10048

KEY PLAN

NOTES
1. SEE ARCH. DWGS. FOR DEMISED PREMISES

LEGEND
EXISTING BASE BUILDING

No.	Date	Revision
A	8-17-90	ISSUED FOR BULLETIN # 116
A	7-6-90	ISSUED FOR BULLETIN # 105
A	6-15-90	REVISED AS INSTALLED
		PACE FLUCC MULTIFLUTE
B	5-5-89	REVISED AS CONSTRUCTED
A	2-1-89	ISSUED FOR PA APPROVAL
	1-20-89	ISSUED FOR CONSTRUCTION
	12-19-88	ISSUED TO P.A. FOR APPROVAL OF BASE BLDG MECH. (FLRS. 1-54 ROOF)

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2nd FLOOR PLAN

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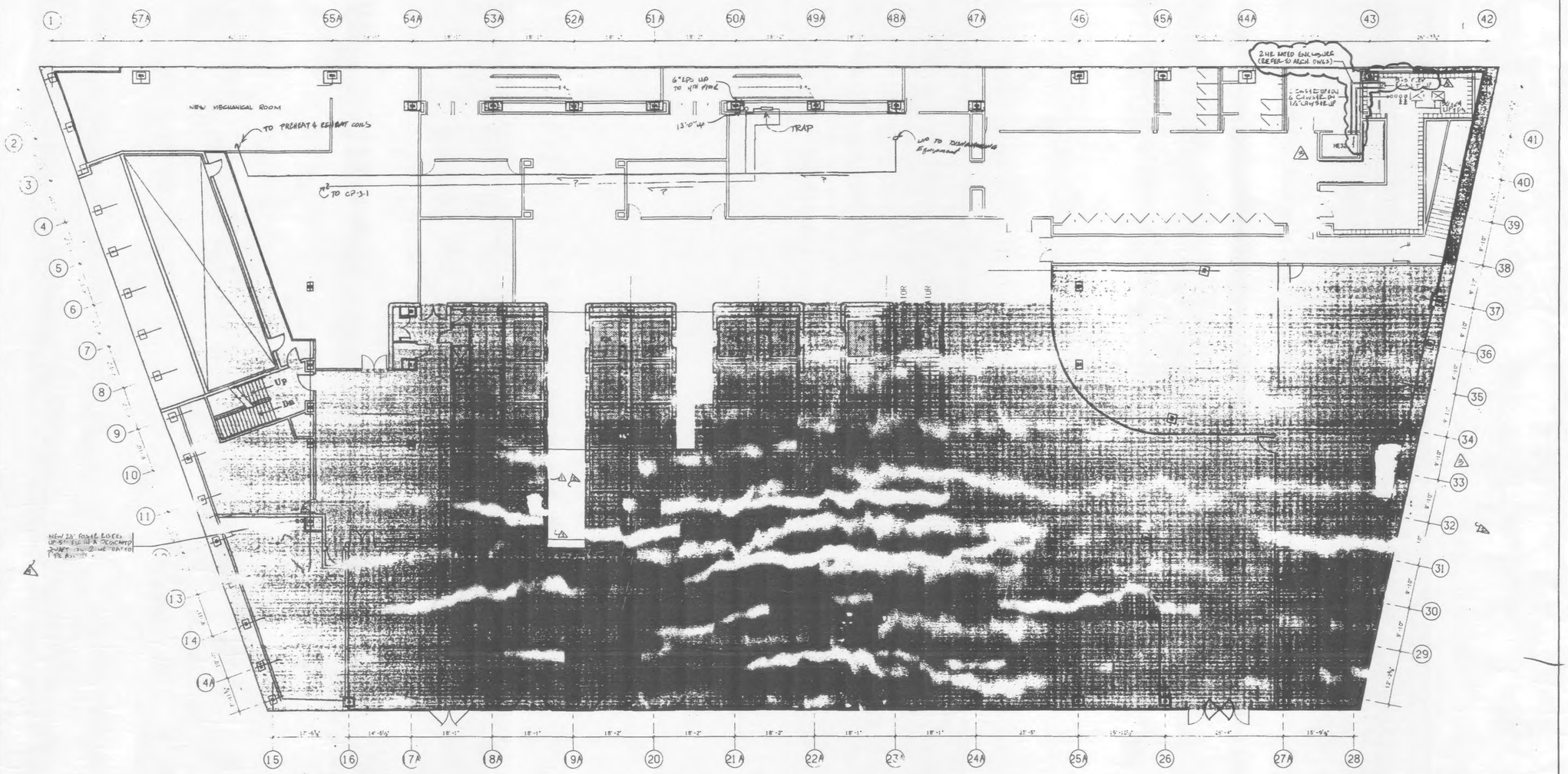
Project No.
Sheet No.
HVAC-2
Date
Scale 1/8" = 1'-0"

WTC1-25-5/DSK2/GROUP 5/HVAC-2



3rd FLOOR PLAN

Salomon Brothers Inc

7 WORLD TRADE CENTER HEADQUARTERS
NEW YORK, NEW YORK 10048

NOTES
1. SEE ARCH. DWGS. FOR DEMISED PREMISES

LEGEND
■ EXISTING BASE BUILDING

No.	Date	Revision
A	8-17-90	ISSUED FOR BULLETIN # 111
A	9-6-90	ISSUED FOR BULLETIN #105
A	10-15-90	REVISED AS CIRCLED. PER DEP'A MODIFICATIONS
A	2-6-91	REVISED AS CIRCLED
A	5-1-91	ISSUED FOR DEP'A APPROVAL
	1-20-89	ISSUED FOR CONSTRUCTION
	12-19-89	ISSUED TO DEP'A FOR APPROV OF BASE BLDG MODIF (ISSUE 1-5 & DATED)

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3rd FLOOR PLAN

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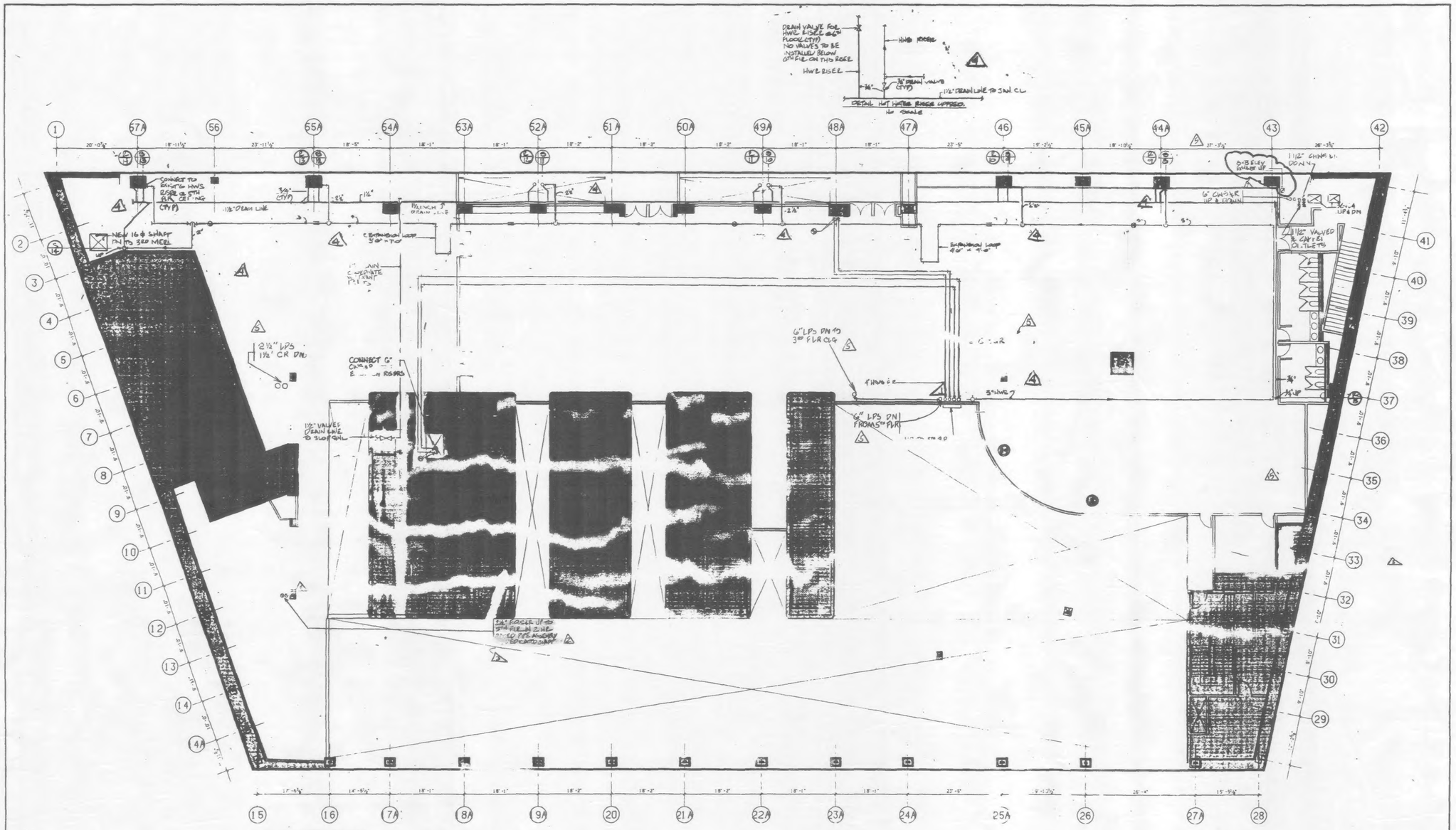
Project No.
Sheet No. HVAC-3
Date
Scale 1/8" = 1'-0"

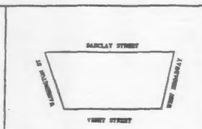
WTC1-25-5/DISK 2/DWGS/HVAC-3



4th FLOOR PLAN

Salomon Brothers Inc

7 WORLD TRADE CENTER HEADQUARTERS
NEW YORK, NEW YORK 10048



KEY PLAN

NOTES

1. SEE ARCH. DWGS. FOR DEMISED PREMISES

LEGEND

No.	Date	Revision
1	8-17-90	ISSUED FOR BULLETIN #116
2	7-2-90	ISSUED FOR BULLETIN #105
3	5-24-90	ISSUED AS "NEW" SCHEME
4	4-13-90	ISSUED AS "NEW" SCHEME
5	8-15-89	REVISED AS CONFORMED SHOP DWG MODIFICATIONS
6	5-22-89	REVISED PER CHECKSET
7	4-14-89	REVISED AS CONFORMED
8	3-31-89	ISSUED FOR CONSTRUCTION
	1-20-89	ISSUED FOR CONSTRUCTION
	12-19-88	ISSUED FOR PERMIT

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4th FLOOR PLAN

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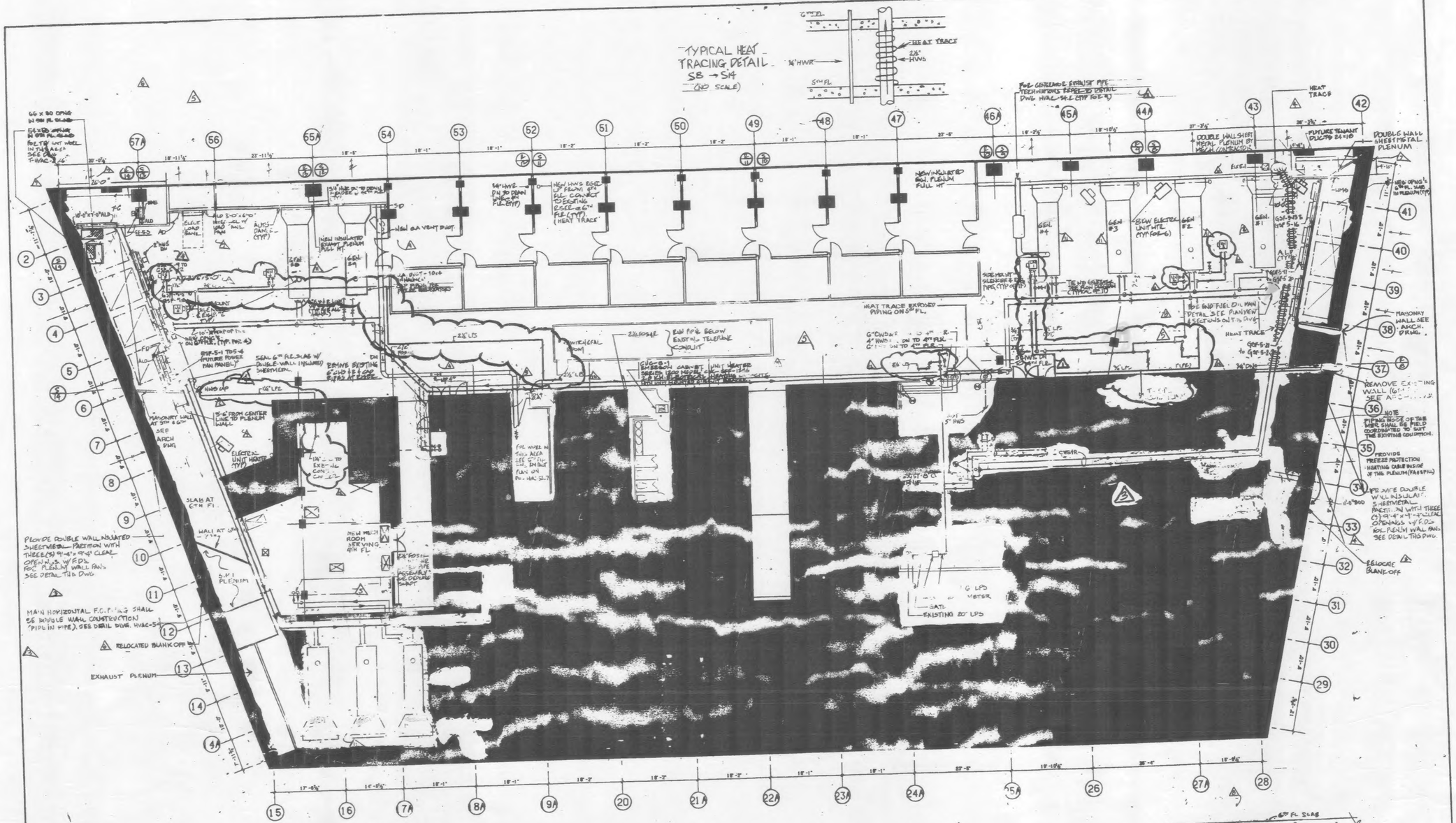
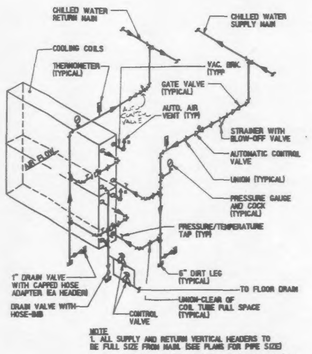
Project No.
Date
Scale 1/8" = 1'-0"
Sheet No. HVAC-4

WTC1-25S/DSK2/GROUPS/HVAC-4

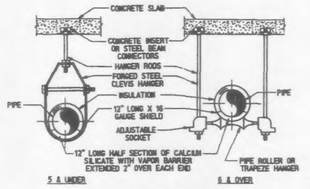
TYPICAL HEAT TRACING DETAIL S8 → S14 (2ND SCALE)


66 x 80 OPNG IN 5TH FL SLAB
EXHD OPNG IN 5TH FL SLAB
FOR TYP UNIT WELL IN THIS AREA SEE DWG T-HVAC-3 & 6
NEW INSULATED SUPPLY PLENUM FULL HT
NEW INSULATED RET. PLENUM FULL HT
NEW 6" HWS & RET. DN TO BSMT MECH. EQUIP. ROOM
NEW HWS & RET. UP FROM BSMT MECH. EQUIP. ROOM TO EXISTING ESER-6 ON 5TH FLR (TYP.) (HEAT TRACE)
NEW HWS ESER-6 UP THRU 5TH FLR TO EXISTING ESER-6 ON 6TH FLR (TYP.) (HEAT TRACE)
NEW 6" HWS & RET. DN TO BSMT MECH. EQUIP. ROOM



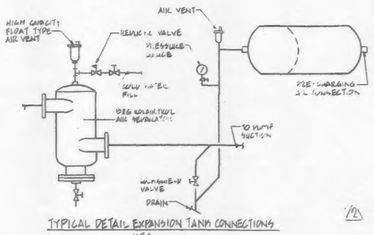
NOTE
1. ALL SUPPLY AND RETURN VERTICAL HEADERS TO BE FULL SIZE FROM MAIN. SEE PLANS FOR PIPE SIZES
2. ALL HORIZONTAL CONNECTIONS TO COILS FROM VERTICAL HEADERS TO BE SIZE OF COIL CONNECTION OUTLET.
3. MAKE PIPING CONNECTIONS TO OBTAIN COUNTERFLOW.

CHILLED WATER COIL PIPING CONNECTION DETAIL (2-WAY VALVE)



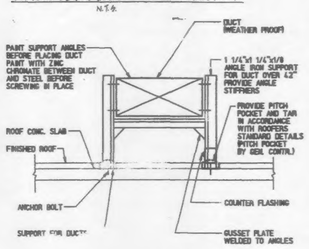
TYPICAL HANGERS FOR CHILLED WATER PIPES.

WHERE STRUCTURAL SLAB DOES NOT PERMIT INSERTS, SUPPORT PIPE FROM STRUCTURE WITH AUXILIARY STEEL IF REQUIRED.



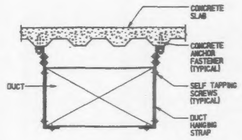
TYPICAL DETAIL EXPANSION TANK CONNECTIONS

N.T.S.



ALL DUCTWORK AND SUPPORTING STEEL SHALL BE GIVEN A COAT OF RUSTOLEUM PAINT. ALL JOINTS CAULKED BEFORE PAINTING.

TYPICAL ROOF DUCT ... DETAIL



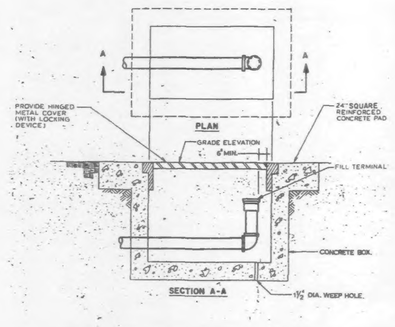
1. PROVIDE BRACING AS FOLLOWS:
FOR DUCTS WITH LARGER DIMENSION 25" TO 40" 1" x 1" x 1/8" ANGLES
FOR DUCTS WITH LARGER DIMENSION 41" TO 90" 1 1/2" x 1 1/2" x 1/8" ANGLES
ANGLES REQUIRED ON 4 SIDES

2. SUSPEND DUCTS WITH GALVANIZED BAND IRON STRAPS 1" x 1/8" SECURELY FASTENED TO THE SIDE OF THE DUCT. STRAPS SUPPORTING DUCTS WIDER THAN 48" TO BE TURNED UNDER BOTTOM OF DUCT AND FASTENED TO BOTTOM AND SIDES.

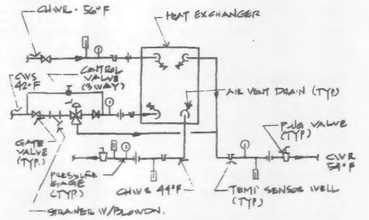
CROSS SECTIONAL AREA (SQ.FT.)	MAX. HANGER SPACING (FT.)
UP TO 6	6
OVER 6 NOT TO EXCEED 10	4

3. WHERE DUCT EXCEEDS 48" IN LARGER DIMENSION BRACING PROVIDE ANGLES ON 4'-0" CENTERS

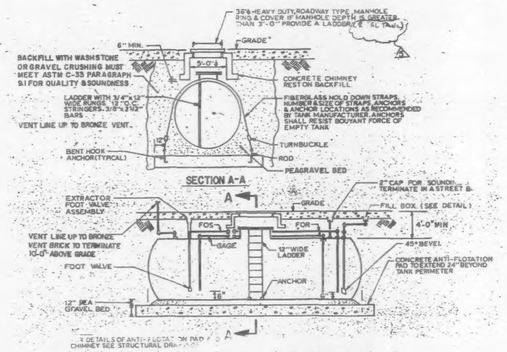
DUCT HANGING DETAIL WITH METAL DECK CONCRETE ANCHOR



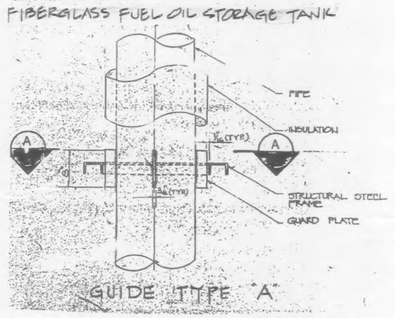
FUEL FILL BOX



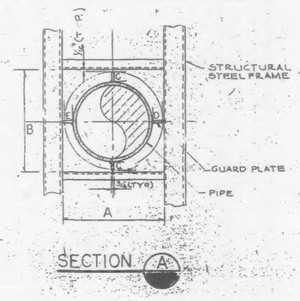
PIPING CONNECTION FOR CH. WATER PLATE HT. EXCHANGER

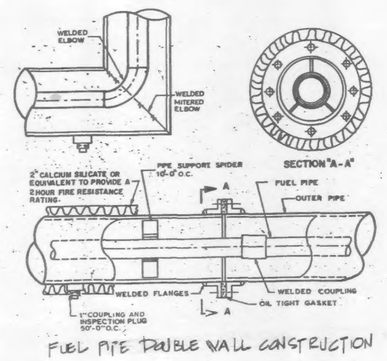


FIBERGLASS FUEL OIL STORAGE TANK

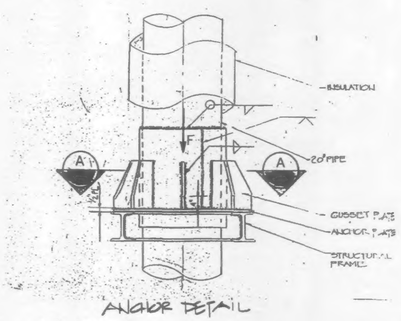


GUIDE TYPE "A"

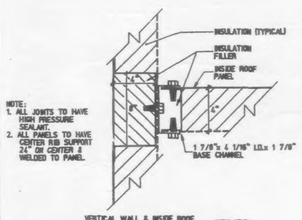




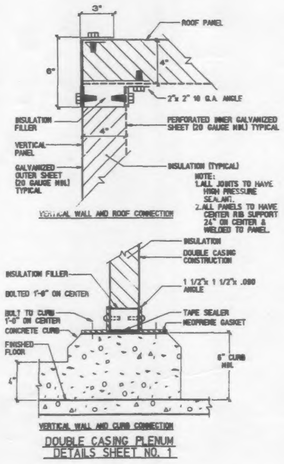
FUEL PIPE DOUBLE WALL CONSTRUCTION



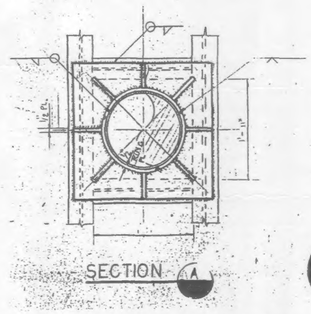
ANCHOR DETAIL



DOUBLE CASING PLENUM DETAILS SHEET NO.2



DOUBLE CASING PLENUM DETAILS SHEET NO. 1



Salomon Brothers Inc

7 WORLD TRADE CENTER HEADQUARTERS
NEW YORK, NEW YORK 10048

NOTES

LEGEND

No.	Date	Revision
8	12-18-89	REVISED AS CIRCLED
		PIPE SLOPE MODIFICATION
7	5-22-89	REVISED AS CIRCLED
6	5-5-89	REVISED AS CIRCLED
5	4-11-89	ISSUED TO P.A. FOR APPR.
1	1-20-89	ISSUED FOR CONSTR.

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DETAILS

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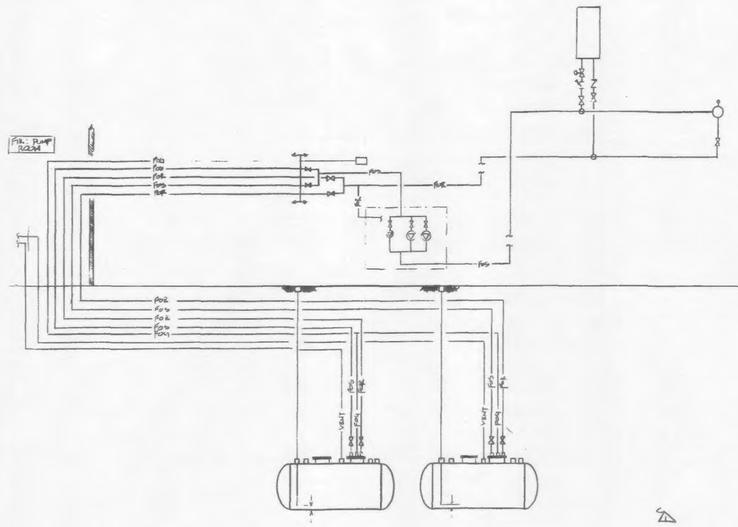
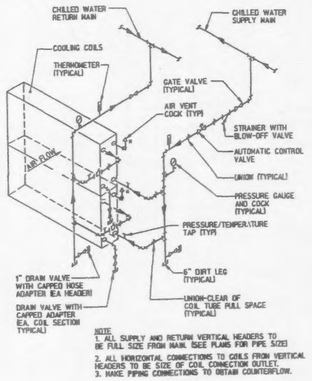
Project No.
Date:
Scale:
Sheet No. HVAC-54

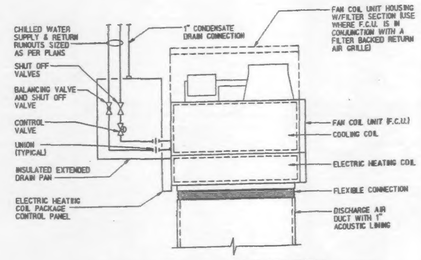
WTCI-25-S/DR 2/cond 5/HVAC-54



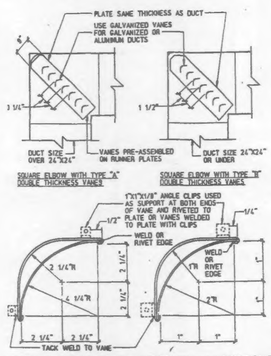
DIESEL FUEL OIL FLOW DIAGRAM



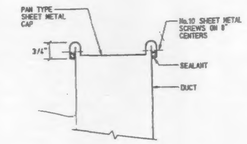
CHILLED WATER COIL PIPING CONNECTION DETAIL (2-WAY VALVE) W-7



FAN COIL UNIT PIPING CONNECTION DETAIL (HORIZONTAL-2-PIPE) W-9

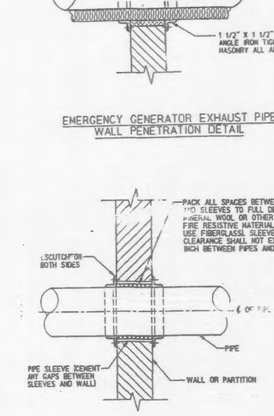


SQUARE DUCT ELBOWS DETAILS

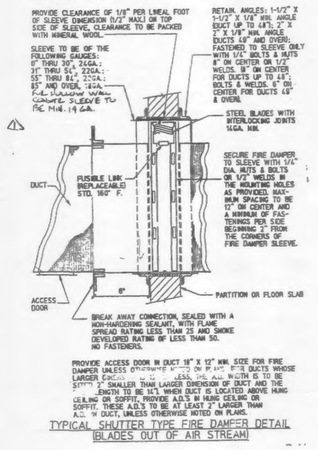


NOTES:
1. EXTEND AND PATCH INSULATION TO COVER CAP ON EXISTING INSULATED DUCTS.
2. PROVIDE DUCT LINING ON CAP ON EXISTING LINED DUCTS.

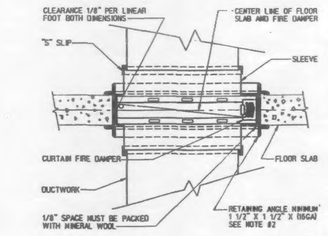
DUCT CAPPING DETAIL



EMERGENCY GENERATOR EXHAUST PIPE WALL PENETRATION DETAIL

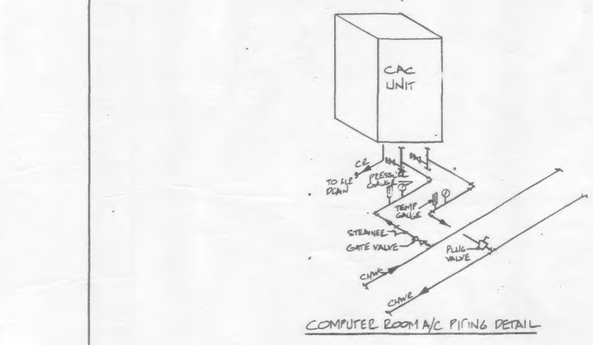


TYPICAL SHUTTER TYPE FIRE DAMPER DETAIL (BLADES OUT OF AIR STREAM)



NOTE: 1. RETAINING ANGLES MUST LAP STRUCTURAL OPENING 1" MINIMUM AND COVER CORNERS OF OPENINGS. ANGLES MUST NOT BE ATTACHED TO EACH OTHER AT CORNERS.
2. SECURE RETAINING ANGLE TO SLEEVE ONLY ON 8" CENTERS WITH:
1. 1/2" LONG WELDS OR
2. 1/4" LONG BOLTS AND NUTS OR
3. #10 STEEL SCREWS OR
4. MINIMUM 3/16" STEEL RIVETS

OUT OF AIR STREAM VERTICAL FIRE DAMPER



COMPUTER ROOM A/C PIPING DETAIL

DETAIL OF PIPING PIERCING FIRE RATED PARTITIONS & WALLS

BOILER STACK DETAIL A

DUPLEX FUEL OIL PUMP SET DETAIL

Salomon Brothers Inc

7 WORLD TRADE CENTER HEADQUARTERS
NEW YORK, NEW YORK 10048

KEY PLAN

NOTES

LEGEND

No.	Date	Revision
5	5-18-90	ISSUED FOR BULLETIN #150
4	8-17-90	ISSUED FOR BULLETIN #36
3	8-17-89	REVISED AS CHECKED
		BASE BLDG MODIFICATION
2	1-6-89	REVISED AS CHECKED
1	2-1-88	ISSUED FOR PERMIT & BID

SOM SKIDMORE, OWINGS & MERRILL
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FLACK AND KURTZ
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475 Fifth Avenue, New York, N.Y. 10018

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DETAILS

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Project No.

Date 3-1-89

Scale 1/2"=1'-0"

Sheet No. HVAC-54.1

WTCH-25-S/DEN 2/GRAD 5/HVAC-541

HVAC SYSTEMS SCHEDULE

| DESIGNATION | SERVICE | LOCATION | TOTAL AIR QUANTITY CFM | WATER QUANTITY GPM | OUTSIDE AIR QUANTITY CFM | FILTER (CAMBRIDGE AS STANDARD) A: ASHRAE 26 x 26 x 12 WITH PREFILTER ASHRAE 65 C: MENDELEAT 24×24×8 | | | | | COOLING COIL AIR SIDE ENT. TEMP. DRY BULB (DEG. F) | AIR SIDE ENT. TEMP. WET BULB (DEG. F) | AIR SIDE LVG. TEMP. DRY BULB (DEG. F) | AIR SIDE LVG. TEMP. WET BULB (DEG. F) | WATER SIDE MAXIMUM ABSORPTION (M. OF WATER) | WATER SIDE FLOW RATE (GPM) | WATER SIDE ENT. TEMP. (DEG. F) | WATER SIDE LVG. TEMP. (DEG. F) | WATER SIDE MAXIMUM PRESS. DROP (FT. OF WATER) | TOTAL COIL CAPACITY MBH | NUMBER OF SECTIONS | SECTION HEIGHT (INCHES) | SECTION LENGTH (INCHES) | TOTAL FACE AREA (SQ. FT.) | FACE VELOCITY (FPM) | SERIES, SURFACE (FPI) | ELECTRIC HEATING COIL NO. QUANTITY | DEF. AIR TEMPERATURE (DEGREES F) | WATER TEMPERATURE (DEGREES F) | MAXIMUM PRESS. DROP (FT. OF WATER) | KW | HEATING CAPACITY MBH | VOLTS/PHASE | HEIGHT x WIDTH (INCHES) | NO. OF STEPS | FACE VELOCITY (FPM) | FAN MAXIMUM AIR QUANTITY CFM | MINIMUM AIR QUANTITY CFM | TOTAL STATIC PRESSURE (INCHES WATER) | MAX. FAN SPEED RPM | MAXIMUM TIP VELOCITY (FPM) | WHEEL DIAMETER (INCHES) | WIDTH & INLET | ARRANGEMENT | DISCHARGE DIRECTION | CLASS | TYPE | MANUFACTURER | MOTOR SIZE | MOTOR BHP | MINIMUM MOTOR HP | MOTOR RPM | MOTOR FRAME | VOLTS/PHASE | CONTROL | VIBRATION ISOLATION TYPE | VIBRATION ISOLATION DEFLECTION | REMARKS | DRAWING NO. |
|---|---|---